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Terms: [patno=37593](#) (Edit Search)

09095101 RE 37593 March 19, 2002

UNITED STATES PATENT AND TRADEMARK OFFICE GRANTED PATENT
RE 37593

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March 19, 2002

Large scale integrated circuit with sense amplifier circuits for low voltage operation

INVENTOR: Etoh, Jun - Hachioji, Japan (JP); Itoh, Kiyoo - Higashikurume, Japan (JP); Kawajiri, Yoshiaki - Hachioji, Japan (JP); Nakagome, Yoshinobu - Hachioji, Japan (JP); Kume, Eiji - Hachioji, Japan (JP); Tanaka, Hitoshi - Tachikawa, Japan (JP)

APPL-NO: 09095101

FILED-DATE: June 10, 1998

GRANTED-DATE: March 19, 2002

PRIORITY: June 17, 1988 - 63-148104, Japan (JP); September 7, 1988 - 63-222317, Japan (JP); February 20, 1989 - 1-29803, Japan (JP); March 20, 1989 - 1-66175, Japan (JP)

ASSIGNEE-AT-ISSUE: Hitachi, Ltd., Tokyo, Japan (JP), 03; Hitachi ULSI Systems Co., Ltd., Tokyo, Japan (JP), 03

LEGAL-REP: Mattingly, Stanger & Malur, P.C.

PUB-TYPE: March 19, 2002 - Reissue Patent (E1)

PUB-COUNTRY: United States (US)

REL-DATA:

Continuation of Ser. No. 07/366869, June 14, 1989, GRANTED PATENT5297097, Utility Patent having no previously published pre-grant publication (A); Reissue of: 08/104508, August 10, 1993, PENDING05526313, June 11, 1996

US-MAIN-CL: 365#18909

US-ADDL-CL: 365#205, 365#226, 327#530, 327#534

SEARCH-FLD: 365#18909 , 365#18911 , 365#226 , 365#205 , 327#530 , 327#534 , 327#537 , 327#538

IPC-MAIN-CL: 7G 11C007#0

IPC ADDL CL: H 02J003#38

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Terms and Connectors Natural Language

patno=37593

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Terms: [patno=5526313](#) (Edit Search)

08104508 5526313 June 11, 1996

UNITED STATES PATENT AND TRADEMARK OFFICE GRANTED PATENT
5526313

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June 11, 1996

Large scale integrated circuit with sense amplifier circuits for low voltage operation
REISSUE: March 19, 2002 - This Patent was reissued on Mar. 19, 2002 as Reissue Patent Re 37,593. Reissue Application filed May 25, 2001 (O.G. Dec. 4, 2001) Ex. Gp.: 2818; Re. S.N. 09/864,338 December 4, 2001

INVENTOR: Etoh, Jun, Hachioji, JPX; Itoh, Kiyo, Higashikurume, JPX; Kawajiri, Yoshiki, Hachioji, JPX; Nakagome, Yoshinobu, Hachioji, JPX; Kume, Eiji, Hachioji, JPX; Tanaka, Hitoshi, Tachikawa, JPX

APPL-NO: 08104508

FILED-DATE: August 10, 1993

GRANTED-DATE: June 11, 1996

PRIORITY: June 17, 1988 - 63-148104, Japan (JP); September 7, 1988 - 63-222317, Japan (JP); February 10, 1989 - 1-29803, Japan (JP); March 20, 1989 - 1-66175, Japan (JP)

ASSIGNEE-AT-ISSUE: Hitachi Ltd., Tokyo, JPX; Hitachi VLSI Engineering Corporation, Tokyo, JPX

ASSIGNEE-AFTER-ISSUE: November 30, 1998 - CHANGE OF NAME (SEE DOCUMENT FOR DETAILS)., HITACHI ULSI SYSTEMS CO., LTD. 22-1, JOSUIHONCHO 5-CHOME KODAIRA-SHI, TOKYO, JAPAN, Reel and Frame Number: 009605/0357

LEGAL-REP: Fay, Sharpe, Beall, Fagan, Minnich & McKee

PUB-TYPE: June 11, 1996 - Utility Patent having no previously published pre-grant publication (A)

PUB-COUNTRY: United States (US)

REL-DATA:

Addition of Ser. No. 5297097; Addition of Ser. No. 366869, June 14, 1989

US-MAIN-CL: 365#205

US-ADDL-CL: 365#190, 365#203

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Terms: [patno=5297097](#) ([Edit Search](#))

07366869 5297097 March 22, 1994

UNITED STATES PATENT AND TRADEMARK OFFICE GRANTED PATENT
5297097

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March 22, 1994

Large scale integrated circuit for low voltage operation

REISSUE: June 10, 1998 - Reissue Application filed Jun. 10, 1998 (O.G. Mar. 23, 1999) Ex. Gp.: 2818;
Re. S.N. 09/095,101 March 23, 1999

INVENTOR: Etoh, Jun, Hachioji, JPX; Itoh, Kiyoo, Higashikurume, JPX; Kawajiri, Yoshiki, Hachioji, JPX; Nakagome, Yoshinobu, Hachioji, JPX; Kume, Eiji, Hachioji, JPX; Tanaka, Hitoshi, Tachikawa, JPX

APPL-NO: 07366869

FILED-DATE: June 14, 1989

GRANTED-DATE: March 22, 1994

PRIORITY: June 17, 1988 - 63-148104, Japan (JP); September 7, 1988 - 63-222317, Japan (JP); February 10, 1989 - 1-29803, Japan (JP); March 20, 1989 - 1-66175, Japan (JP)

ASSIGNEE-AT-ISSUE: Hitachi Ltd., Tokyo, JPX; Hitachi VLSI Engineering, Tokyo, JPX

ASSIGNEE-AFTER-ISSUE: June 14, 1989 - ASSIGNMENT OF ASSIGNORS INTEREST., HITACHI, LTD., 6, KANDA SURUGADAI 4-CHOME, CHIYODA-KU, TOKYO, JAPAN A CORP. OF JAPAN, HITACHI VLSI ENGINEERING, 20-1, JOUSUIHONCHO 5-CHOME, KODAIRA-SHI, TOKYO, JAPAN A CORP. OF JAPAN, Reel and Frame Number: 005098/0677

LEGAL-REP: Fay, Sharpe, Beall, Fagan, Minnich & McKee

PUB-TYPE: March 22, 1994 - Utility Patent having no previously published pre-grant publication (A)

PUB-COUNTRY: United States (US)

US-MAIN-CL: 365#226

US-ADDL-CL: 327#530, 365#18909, 365#203, 365#229

SEARCH-FLD: 365##226, 365##227, 365##228, 365##229, 365##203, 365##222, 365##18909, 365##18911, 307##2961, 307##2966, 307##2968

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Terms: [patno=5262999](#) (Edit Search)

07838505 5262999 November 16, 1993

UNITED STATES PATENT AND TRADEMARK OFFICE GRANTED PATENT
5262999

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November 16, 1993

Large scale integrated circuit for low voltage operation

INVENTOR: Etoh, Jun, Hachioji, JPX; Itoh, Kiyo, Higashihurume, JPX; Kawajiri, Yoshiki, Hachioji, JPX; Nakagome, Yoshinobu, Hachioji, JPX; Kume, Eiji, Hachioji, JPX; Tanaka, Hitoshi, Tachikawa, JPX

APPL-NO: 07838505

FILED-DATE: March 24, 1992

GRANTED-DATE: November 16, 1993

PRIORITY: June 17, 1988 - 63-148104, Japan (JP); September 7, 1988 - 63-222317, Japan (JP); February 10, 1989 - 1-29803, Japan (JP); March 20, 1989 - 1-66175, Japan (JP)

ASSIGNEE-AT-ISSUE: Hitachi, Ltd., Tokyo, JPX; Hitachi VLSI Engineering Corporation, Tokyo, JPX

LEGAL-REP: Fay, Sharpe, Beall, Fagan, Minnich & McKee

PUB-TYPE: November 16, 1993 - Utility Patent having no previously published pre-grant publication (A)

PUB-COUNTRY: United States (US)

REL-DATA:

Addition of Ser. No. 366869, June 14, 1989

US-MAIN-CL: 365#226

US-ADDL-CL: 365#203, 365#227, 365#229

SEARCH-FLD: 365##203, 365##226, 365##227, 365##228, 365##229, 365##18909, 365##18911, 307##2961, 307##2966, 307##2968

IPC-MAIN-CL: G 11C005#14

IPC ADDL CL: G 11C007#0

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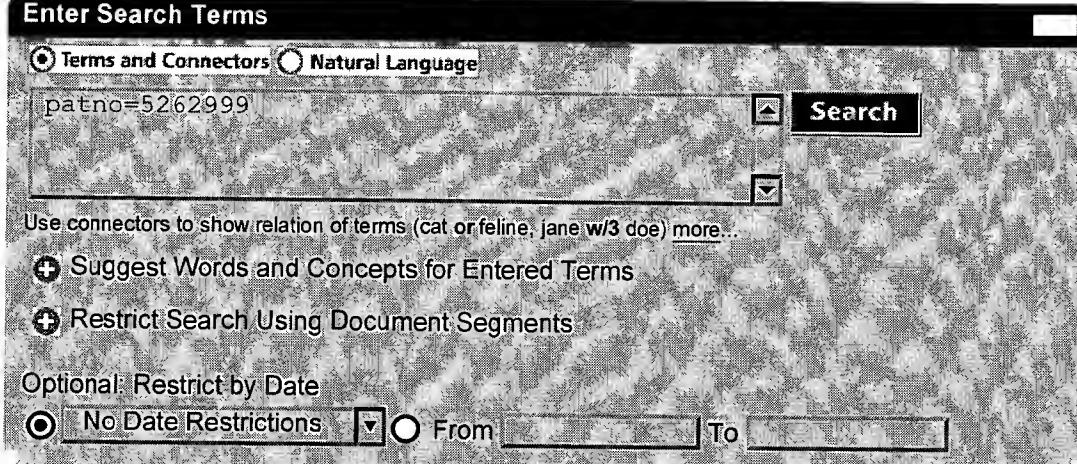
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Last update of file: 2002/07/31 (YYYY/MM/DD) 2002-30/UP (basic update)

Search statement 1

?re37593/pn

** SS 1: Results 1

Search statement 2

?prt fu legalall max

1/1 PLUSPAT - (C) QUESTEL-ORBIT
PN - USRE37593 E1 20020319 [USRE37593]
TI - (E1) Large scale integrated circuit with sense amplifier circuits for
low voltage operation
PA - (E1) HITACHI ULSI SYS CO LTD (JP); HITACHI LTD (JP)
IN - (E1) KUME EIJI (JP); ETOH JUN (JP); ITOH KIYOO (JP); TANAKA HITOSHI
(JP); KAWAJIRI YOSHIKI (JP); NAKAGOME YOSHINOBU (JP)
AP - US9510198 19980610 [1998US-0095101]
PR - US9510198 19980610 [1998US-0095101]
- JP14810488 19880617 [1988JP-0148104]
- JP22231788 19880907 [1988JP-0222317]
- JP2980389 19890210 [1989JP-0029803]
- JP6617589 19890320 [1989JP-0066175]
- US10450893 19930810 [1993US-0104508]
- US36686989 19890614 [1989US-0366869]
IC - (E1) G11C-007/00 H02J-003/38
EC - G11C-005/14R
- G11C-011/406
- G11C-011/4074
- G11C-011/4096
PCL - ORIGINAL (O) : 365189090; CROSS-REFERENCE (X) : 327530000 327534000
365205000 365226000
DT - Corresponding document
CT - US3980935; US4161040; US4288865; US4290119; US4399524; US4460835;
US4482985; US4539660; US4730122; US4780850; US4780852; US4794564;
US4833341; US4855613; US4896297; US4916667; US4931075; US4937789;
US4943952; US4943960; US4952825; US4961166; US4962482; US4982367;
US4984202; US4994688; US5046052; US5148255; US5227697; US5272393;
JP53-12280; JP53-114625; JP54-158848; JP55-038611; JP56-105389;
JP56-130894; JP56-159892; JP57-82285; JP57-172761; JP58-070482;
JP58-108089; JP59-151389; JP60-45997; JP60-167523; JP60-242585;
JP61-61479; JP61-148700; JP61-158094; JP61-217986; JP62-015910;
JP62-112357; JP62-119958; JP62-183161; JP62-208496; JP63-037716;
JP63-64694; JP63-76007; JP63-94499; JP63-086559; JP63-179576;
JP63-211193; JP63-282994; JP63-299409; JP63-308791; JP63-308792;
JP1-105391; JP1-149292; JP1-149293
- IEEE Journal of Solid State Circuits, vol. 23, No. 1, pp. 12-18, Feb.
1988.*

NEC 4-bit Microprocessor Handbook, p. 148 (no English translation).*

8/8/02

RE 37593

09/864338

Hitachi IC Memory Data Book, Hitachi, Ltd., Tokyo, pp. 44-45, Jun. 1987.

STG - (E1) Reissue Patent

AB - Disclosed is a one-chip ULSI which can carry out the fixed operation in a wide range of power supply voltage (1 V to 5.5 V). This one-chip ULSI is composed of a voltage converter circuit(s) which serves to a fixed internal voltage for a wide range of power supply voltage, an input/output buffer which can be adapted to several input/output levels, a dynamid RAM(s) which can operate at a power supply voltage of 2 V or less, etc. This one-chip ULSI can be applied to compact and portable electronic devices such as a lap-top type personal computer, an electronic pocket note book, a solid-state camera, etc.

UP - 2002-14

1/1 LGST - (C) LEGSTAT
PN - US 37593 [USRE37593]
AP - US 95101/98 19980610 [1998US-0095101]
DT - US-E
ACT - 19980610 US/AE-A
APPLICATION DATA (PATENT)
{US 95101/98 19980610 [1998US-0095101]}
- 20020319 US/E1 [+]
REISSUE (PRE-GRANT)
UP - 2002-15

1/1 PAST - (C) Thomson Derwent
AN - 200212-001769
PN - 5526313 A [US5526313]
DT - A (UTILITY)
OG - 2002-03-19
CO - RE
ACT - REISSUE PATENT
SH - REISSUE PATENT
RL - USRE37593

Search statement 2

?file inpadoc

Selected file: INPADOC
?fam us5526313/pn

1 Patent Groups
** SS 3: Results 25

Search statement 4

?famstate nonstop

1/25 INPADOC - (C) INPADOC
PN - DE 68903091 CO 19921105 [DE68903091]
TI - SCHEIBENWISCHER.
IN - ARAI LTD [JP]; SAITA LTD [JP]
PA - NIPPON WIPER BLADE CO LTD [JP]

8/8/02

RE 37593

09/864338

AP - DE 89311562/89-EP 19891108 [1989EP-0311562]
PR - JP 148104/88-U 19881115 [1988JP-U148104]
- JP 11415/89-U 19890203 [1989JP-U011415]
- JP 13615/89-U 19890209 [1989JP-U013615]
IC - B60S-001/32

1/2 LEGALI - (C) LEGSTAT
PN - DE 68903091 [DE68903091]
DT - DE-P
ACTE- 19921105 DE/REF-P
CORRESPONDS TO
(EP 369672 19921105 [EP-369672])
- 19930225 DE/8373
TRANSLATION OF PATENT DOCUMENT OF EUROPEAN PATENT WAS RECEIVED AND HAS
BEEN PUBLISHED
- 19931028 DE/8364 [+]
NO OPPOSITION DURING TERM OF OPPOSITION
- 19981210 DE/8339 [-]
CEASED/NON-PAYMENT OF THE ANNUAL FEE
UP - 1998-51

2/2 LEGALI - (C) LEGSTAT
PN - EP 369672 [EP-369672]
AP - EP 89311562/89 19891108 [1989EP-0311562]
DT - EP-P
ACTE- 19891108 EP/AE-A
EP-APPLICATION
{EP 89311562/89 19891108 [1989EP-0311562]}
- 19900523 EP/AK-A2 [+]
DESIGNATED CONTRACTING STATES IN AN APPLICATION WITHOUT SEARCH REPORT:
DE FR GB
- 19900523 EP/A2 [+]
PUBLICATION OF APPLICATION WITHOUT SEARCH REPORT
- 19900530 EP/RPR1
PRIORITY (CORRECTION)
JP 881115 148104/88 U * JP 890203 11415/89 U * JP 890209 13615/89
U
- 19901107 EP/AK-A3 [+]
DESIGNATED CONTRACTING STATES IN A SEARCH REPORT:
DE FR GB
- 19901107 EP/A3 [+]
SEPARATE PUBLICATION OF THE SEARCH REPORT (ART. 93)
- 19910220 EP/17P [+]
REQUEST FOR EXAMINATION FILED
901219
- 19920122 EP/17Q [+]
FIRST EXAMINATION REPORT
911209
- 19920930 EP/AK-B1 [+]
DESIGNATED CONTRACTING STATES MENTIONED IN A PATENT SPECIFICATION:
DE FR GB
- 19920930 EP/B1 [+]
PATENT SPECIFICATION
- 19921105 EP/REF-P
CORRESPONDS TO:
(DE 68903091 19921105 [DE68903091])
- 19921113 EP/ET [+]
FR: TRANSLATION FILED

- 19930922 EP/26N [+]
 NO OPPOSITION FILED
 - 19980701 EP/GBPC [-]
 GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE
 971108
 - 19981002 EP/REG; FR/ST [-]
 FR: LAPSED
 <FR>
 UP - 1998-46

2/25 INPADOC - (C) INPADOC
 PN - DE 68903091 T2 19930225 [DE68903091]
 TI - SCHEIBENWISCHER.
 IN - ARAI LTD [JP]; SAITA LTD [JP]
 PA - NIPPON WIPER BLADE CO LTD [JP]
 AP - EP 89311562/89-EP 19891108 [1989EP-0311562]
 PR - JP 148104/88-U 19881115 [1988JP-U148104]
 - JP 11415/89-U 19890203 [1989JP-U011415]
 - JP 13615/89-U 19890209 [1989JP-U013615]
 IC - B60S-001/32

1/2 LEGALI - (C) LEGSTAT
 PN - DE 68903091 [DE68903091]
 DT - DE-P
 ACTE- 19921105 DE/REF-P
 CORRESPONDS TO
 (EP 369672 19921105 [EP-369672])
 - 19930225 DE/8373
 TRANSLATION OF PATENT DOCUMENT OF EUROPEAN PATENT WAS RECEIVED AND HAS
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 - 19931028 DE/8364 [+]
 NO OPPOSITION DURING TERM OF OPPOSITION
 - 19981210 DE/8339 [-]
 CEASED/NON-PAYMENT OF THE ANNUAL FEE
 UP - 1998-51

2/2 LEGALI - (C) LEGSTAT
 PN - EP 369672 [EP-369672]
 AP - EP 89311562/89 19891108 [1989EP-0311562]
 DT - EP-P
 ACTE- 19891108 EP/AE-A
 EP-APPLICATION
 {EP 89311562/89 19891108 [1989EP-0311562]}
 - 19900523 EP/AK-A2 [+]
 DESIGNATED CONTRACTING STATES IN AN APPLICATION WITHOUT SEARCH REPORT:
 DE FR GB
 - 19900523 EP/A2 [+]
 PUBLICATION OF APPLICATION WITHOUT SEARCH REPORT
 - 19900530 EP/RPR1
 PRIORITY (CORRECTION)
 JP 881115 148104/88 U * JP 890203 11415/89 U * JP 890209 13615/89
 U
 - 19901107 EP/AK-A3 [+]
 DESIGNATED CONTRACTING STATES IN A SEARCH REPORT:
 DE FR GB
 - 19901107 EP/A3 [+]
 SEPARATE PUBLICATION OF THE SEARCH REPORT (ART. 93)

8/8/02

RE 37593

09/864338

- 19910220 EP/17P [+]
REQUEST FOR EXAMINATION FILED
901219
- 19920122 EP/17Q [+]
FIRST EXAMINATION REPORT
911209
- 19920930 EP/AK-B1 [+]
DESIGNATED CONTRACTING STATES MENTIONED IN A PATENT SPECIFICATION:
DE FR GB
- 19920930 EP/B1 [+]
PATENT SPECIFICATION
- 19921105 EP/REF-P
CORRESPONDS TO:
(DE 68903091 19921105 [DE68903091])
- 19921113 EP/ET [+]
FR: TRANSLATION FILED
- 19930922 EP/26N [+]
NO OPPOSITION FILED
- 19980701 EP/GBPC [-]
GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE
971108
- 19981002 EP/REG; FR/ST [-]
FR: LAPSED
<FR>

UP - 1998-46

3/25 INPADOC - (C) INPADOC
PN - EP 369672 A2 19900523 [EP-369672]
TI - WINDSHIELD WIPER
LA - E; ENG
IN - ARAI MASARU C O NIPPON WIPERBL; SAITA ITSURO C O NIPPON WIPERB
PA - NIPPON WIPER BLADE CO LTD [JP]
AP - EP 89311562/89-A 19891108 [1989EP-0311562]
PR - JP 148104/88-A 19881115 [1988JP-0148104]
- JP 11415/89-A 19890203 [1989JP-0011415]
- JP 13615/89-A 19890209 [1989JP-0013615]
IC - B60S-001/32
DS - DE* FR* GB*

1/2 LEGALI - (C) LEGSTAT
PN - DE 68903091 [DE68903091]
DT - DE-P
ACTE- 19921105 DE/REF-P
CORRESPONDS TO
(EP 369672 19921105 [EP-369672])
- 19930225 DE/8373
TRANSLATION OF PATENT DOCUMENT OF EUROPEAN PATENT WAS RECEIVED AND HAS
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- 19931028 DE/8364 [+]
NO OPPOSITION DURING TERM OF OPPOSITION
- 19981210 DE/8339 [-]
CEASED/NON-PAYMENT OF THE ANNUAL FEE
UP - 1998-51

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PN - EP 369672 [EP-369672]
AP - EP 89311562/89 19891108 [1989EP-0311562]

8/8/02

RE 37593

09/864338

DT - EP-P
ACTE- 19891108 EP/AE-A
EP-APPLICATION
{EP 89311562/89 19891108 [1989EP-0311562]}
- 19900523 EP/AK-A2 [+]
DESIGNATED CONTRACTING STATES IN AN APPLICATION WITHOUT SEARCH REPORT:
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- 19900523 EP/A2 [+]
PUBLICATION OF APPLICATION WITHOUT SEARCH REPORT
- 19900530 EP/RPR1
PRIORITY (CORRECTION)
JP 881115 148104/88 U * JP 890203 11415/89 U * JP 890209 13615/89
U
- 19901107 EP/AK-A3 [+]
DESIGNATED CONTRACTING STATES IN A SEARCH REPORT:
DE FR GB
- 19901107 EP/A3 [+]
SEPARATE PUBLICATION OF THE SEARCH REPORT (ART. 93)
- 19910220 EP/17P [+]
REQUEST FOR EXAMINATION FILED
901219
- 19920122 EP/17Q [+]
FIRST EXAMINATION REPORT
911209
- 19920930 EP/AK-B1 [+]
DESIGNATED CONTRACTING STATES MENTIONED IN A PATENT SPECIFICATION:
DE FR GB
- 19920930 EP/B1 [+]
PATENT SPECIFICATION
- 19921105 EP/REF-P
CORRESPONDS TO:
(DE 68903091 19921105 [DE68903091])
- 19921113 EP/ET [+]
FR: TRANSLATION FILED
- 19930922 EP/26N [+]
NO OPPOSITION FILED
- 19980701 EP/GBPC [-]
GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE
971108
- 19981002 EP/REG; FR/ST [-]
FR: LAPSED
<FR>
UP - 1998-46

4/25 INPADOC - (C) INPADOC
PN - EP 369672 A3 19901107 [EP-369672]
TI - WINDSHIELD WIPER
LA - E; ENG
IN - ARAI MASARU C O NIPPON WIPERBL; SAITA ITSURO C O NIPPON WIPERB
PA - NIPPON WIPER BLADE CO LTD [JP]
AP - EP 89311562/89-A 19891108 [1989EP-0311562]
PR - JP 148104/88-A 19881115 [1988JP-0148104]
- JP 11415/89-A 19890203 [1989JP-0011415]
- JP 13615/89-A 19890209 [1989JP-0013615]
IC - B60S-001/32
DS - DE* FR* GB*

8/8/02

RE 37593

09/864338

1/2 LEGALI - (C) LEGSTAT
PN - DE 68903091 [DE68903091]
DT - DE-P
ACTE- 19921105 DE/REF-P
CORRESPONDS TO
(EP 369672 19921105 [EP-369672])
- 19930225 DE/8373
TRANSLATION OF PATENT DOCUMENT OF EUROPEAN PATENT WAS RECEIVED AND HAS
BEEN PUBLISHED
- 19931028 DE/8364 [+]
NO OPPOSITION DURING TERM OF OPPOSITION
- 19981210 DE/8339 [-]
CEASED/NON-PAYMENT OF THE ANNUAL FEE
UP - 1998-51

2/2 LEGALI - (C) LEGSTAT
PN - EP 369672 [EP-369672]
AP - EP 89311562/89 19891108 [1989EP-0311562]
DT - EP-P
ACTE- 19891108 EP/AE-A
EP-APPLICATION
{EP 89311562/89 19891108 [1989EP-0311562]}
- 19900523 EP/AK-A2 [+]
DESIGNATED CONTRACTING STATES IN AN APPLICATION WITHOUT SEARCH REPORT:
DE FR GB
- 19900523 EP/A2 [+]
PUBLICATION OF APPLICATION WITHOUT SEARCH REPORT
- 19900530 EP/RPR1
PRIORITY (CORRECTION)
JP 881115 148104/88 U * JP 890203 11415/89 U * JP 890209 13615/89
U
- 19901107 EP/AK-A3 [+]
DESIGNATED CONTRACTING STATES IN A SEARCH REPORT:
DE FR GB
- 19901107 EP/A3 [+]
SEPARATE PUBLICATION OF THE SEARCH REPORT (ART. 93)
- 19910220 EP/17P [+]
REQUEST FOR EXAMINATION FILED
901219
- 19920122 EP/17Q [+]
FIRST EXAMINATION REPORT
911209
- 19920930 EP/AK-B1 [+]
DESIGNATED CONTRACTING STATES MENTIONED IN A PATENT SPECIFICATION:
DE FR GB
- 19920930 EP/B1 [+]
PATENT SPECIFICATION
- 19921105 EP/REF-P
CORRESPONDS TO:
(DE 68903091 19921105 [DE68903091])
- 19921113 EP/ET [+]
FR: TRANSLATION FILED
- 19930922 EP/26N [+]
NO OPPOSITION FILED
- 19980701 EP/GBPC [-]
GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE
971108
- 19981002 EP/REG; FR/ST [-]
FR: LAPSED

<FR>
UP - 1998-46

5/25 INPADOC - (C) INPADOC
PN - EP 369672 B1 19920930 [EP-369672]
TI - WINDSHIELD WIPER
LA - E; ENG
IN - ARAI MASARU C O NIPPON WIPERBL [JP]; SAITA ITSURO C O NIPPON WIPERB [JP]
PA - NIPPON WIPER BLADE CO LTD [JP]
AP - EP 89311562/89-A 19891108 [1989EP-0311562]
PR - JP 148104/88-U 19881115 [1988JP-U148104]
- JP 11415/89-U 19890203 [1989JP-U011415]
- JP 13615/89-U 19890209 [1989JP-U013615]
IC - B60S-001/32
DS - DE* FR* GB*

1/2 LEGALI - (C) LEGSTAT
PN - DE 68903091 [DE68903091]
DT - DE-P
ACTE- 19921105 DE/REF-P
CORRESPONDS TO
(EP 369672 19921105 [EP-369672])
- 19930225 DE/8373
TRANSLATION OF PATENT DOCUMENT OF EUROPEAN PATENT WAS RECEIVED AND HAS
BEEN PUBLISHED
- 19931028 DE/8364 [+]
NO OPPOSITION DURING TERM OF OPPOSITION
- 19981210 DE/8339 [-]
CEASED/NON-PAYMENT OF THE ANNUAL FEE
UP - 1998-51

2/2 LEGALI - (C) LEGSTAT
PN - EP 369672 [EP-369672]
AP - EP 89311562/89 19891108 [1989EP-0311562]
DT - EP-P
ACTE- 19891108 EP/AE-A
EP-APPLICATION
{EP 89311562/89 19891108 [1989EP-0311562]}
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DESIGNATED CONTRACTING STATES IN AN APPLICATION WITHOUT SEARCH REPORT:
DE FR GB
- 19900523 EP/A2 [+]
PUBLICATION OF APPLICATION WITHOUT SEARCH REPORT
- 19900530 EP/RPR1
PRIORITY (CORRECTION)
JP 881115 148104/88 U * JP 890203 11415/89 U * JP 890209 13615/89
U
- 19901107 EP/AK-A3 [+]
DESIGNATED CONTRACTING STATES IN A SEARCH REPORT:
DE FR GB
- 19901107 EP/A3 [+]
SEPARATE PUBLICATION OF THE SEARCH REPORT (ART. 93)
- 19910220 EP/17P [+]
REQUEST FOR EXAMINATION FILED
901219
- 19920122 EP/17Q [+]

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RE 37593

09/864338

FIRST EXAMINATION REPORT

911209

- 19920930 EP/AK-B1 [+]
DESIGNATED CONTRACTING STATES MENTIONED IN A PATENT SPECIFICATION:
DE FR GB
- 19920930 EP/B1 [+]
PATENT SPECIFICATION
- 19921105 EP/REF-P
CORRESPONDS TO:
(DE 68903091 19921105 [DE68903091])
- 19921113 EP/ET [+]
FR: TRANSLATION FILED
- 19930922 EP/26N [+]
NO OPPOSITION FILED
- 19980701 EP/GBPC [-]
GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE
971108
- 19981002 EP/REG; FR/ST [-]
FR: LAPSED
<FR>

UP - 1998-46

6/25 INPADOC - (C) INPADOC
PN - JP 2003161 A2 19900108 [JP02003161]
TI - MEMORY CIRCUIT
IN - ETO JUN; ITO KIYOO; KAWAJIRI YOSHIKI
PA - HITACHI LTD
AP - JP 148104/88-A 19880617 [1988JP-0148104]
PR - JP 148104/88-A 19880617 [1988JP-0148104]
IC - G11C-011/409

7/25 INPADOC - (C) INPADOC
PN - JP 2071491 A2 19900312 [JP02071491]
TI - SEMICONDUCTOR DEVICE
IN - ETO JUN; ITO KIYOO; KAWAJIRI YOSHIKI
PA - HITACHI LTD
AP - JP 222317/88-A 19880907 [1988JP-0222317]
PR - JP 222317/88-A 19880907 [1988JP-0222317]
IC - G11C-011/401; G06F-001/32

8/25 INPADOC - (C) INPADOC
PN - JP 2194248 A2 19900731 [JP02194248]
TI - EXTERIOR PANEL FITTING DEVICE FOR BUILDING
IN - HANAOKA KATSUHIKO; TANAKA HIROSHI; USUI KENICHI
PA - KIKUKAWA KOGYO
AP - JP 13615/89-A 19890123 [1989JP-0013615]
PR - JP 13615/89-A 19890123 [1989JP-0013615]
IC - E04F-013/08; E04G-023/02

9/25 INPADOC - (C) INPADOC
PN - JP 2195100 A2 19900801 [JP02195100]
TI - INFORMATION ARRANGEMENT AND REFERENCE METHOD IN HIERARCHY ORGANIZATION
SYSTEM
IN - ENDO TSUTOMU
PA - FUJI ELECTRIC CO LTD; FUJI FACOM CORP

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09/864338

AP - JP 11415/89-A 19890120 [1989JP-0011415]
PR - JP 11415/89-A 19890120 [1989JP-0011415]
IC - F17D-001/08; E03D-001/00; F04B-049/06

10/25 INPADOC - (C) INPADOC
PN - JP 2210688 A2 19900822 [JP02210688]
TI - SEMICONDUCTOR DEVICE
IN - NAKAGOME YOSHINOBU; ITO KIYOO
PA - HITACHI LTD
AP - JP 29803/89-A 19890210 [1989JP-0029803]
PR - JP 29803/89-A 19890210 [1989JP-0029803]
IC - G11C-011/406; G11C-011/401; H01L-027/04; H01L-027/108; H01L-029/784

11/25 INPADOC - (C) INPADOC
PN - JP 2246089 A2 19901001 [JP02246089]
TI - SEMICONDUCTOR INTEGRATED CIRCUIT
IN - KUME EIJI; TANAKA HITOSHI; NAKAGOME YOSHINOBU; KAWAJIRI YOSHIKI; ITO KIYOO
PA - HITACHI LTD; HITACHI VLSI ENG
AP - JP 66175/89-A 19890320 [1989JP-0066175]
PR - JP 66175/89-A 19890320 [1989JP-0066175]
IC - G11C-011/409

12/25 INPADOC - (C) INPADOC
PN - JP 6092689 B4 19941116 [JP94092689]
AP - JP 13615/89-A 19890123 [1989JP-0013615]
PR - JP 13615/89-A 19890123 [1989JP-0013615]
IC - E04F-013/08; E04F-013/12; E04G-023/02

13/25 INPADOC - (C) INPADOC
PN - JP 7117199 B4 19951218 [JP95117199]
AP - JP 11415/89-A 19890120 [1989JP-0011415]
PR - JP 11415/89-A 19890120 [1989JP-0011415]
IC - F17D-001/08; E03B-001/00; F04B-049/06

14/25 INPADOC - (C) INPADOC
PN - JP 2765856 B2 19980618 [JP2765856]
IN - ETO JUN; ITO KYOO; KAWAJIRI YOSHIKI
PA - HITACHI LTD
AP - JP 148104/88-A 19880617 [1988JP-0148104]
PR - JP 148104/88-A 19880617 [1988JP-0148104]
IC - G11C-011/404; G11C-011/407; G11C-011/409; H01L-021/8242; H01L-027/108

15/25 INPADOC - (C) INPADOC
PN - JP 2796311 B2 19980910 [JP2796311]
IN - ETO JUN; ITO KYOO; KAWAJIRI YOSHIKI
PA - HITACHI LTD
AP - JP 222317/88-A 19880907 [1988JP-0222317]
PR - JP 222317/88-A 19880907 [1988JP-0222317]
IC - G11C-011/404; G11C-011/407; H01L-021/8242; H01L-027/108

16/25 INPADOC - (C) INPADOC

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RE 37593

09/864338

PN - JP 2914989 B2 19990705 [JP2914989]
IN - NAKAGOME YOSHINOBU; ITO KYOO
PA - HITACHI LTD
AP - JP 29803/89-A 19890210 [1989JP-0029803]
PR - JP 29803/89-A 19890210 [1989JP-0029803]
IC - G11C-011/407; G05F-001/56; G11C-011/413; H01L-021/822; H01L-021/8242;
H01L-027/04; H01L-027/108

17/25 INPADOC - (C) INPADOC
PN - JP 2934448 B2 19990816 [JP2934448]
IN - KUME EIJI; TANAKA HITOSHI; NAKAGOME YOSHINOBU; KAWAJIRI YOSHIKI; ITO
KYOO
PA - HITACHI LTD; HITACHI CHO ERU ESU AI SHISUTE
AP - JP 66175/89-A 19890320 [1989JP-0066175]
PR - JP 66175/89-A 19890320 [1989JP-0066175]
IC - G11C-011/409; G11C-011/407; G11C-011/419; H01L-021/8242; H01L-027/108

18/25 INPADOC - (C) INPADOC
PN - KR 9205108 Y1 19920727 [KRU925108]
TI - COMPACT DISC PLAYER
IN - LEE HAN-BAEK [KR]
PA - INKEL CO LTD [KR]
AP - KR 9008373/90-U 19900614 [1990KR-U008373]
PR - KR 9008373/90-U 19900614 [1990KR-U008373]
IC - G11B-017/04

19/25 INPADOC - (C) INPADOC
PN - KR 156542 B1 19981201 [KR-156542]
TI - SEMICONDUCTOR APPARATUS
IN - JUN ETOH [JP]; KIYO ITO [JP]; YOSHIKI KAWAJIRI [JP]; YOSHINOBU
NAKAKOME [JP]; EIJI KUME [JP]; HITOSHI TANAKA [JP]
PA - HITACHI LTD [JP]; HITACHI VLSI ENGINEERING LTD [JP]
AP - KR 8908373/89-A 19890617 [1989KR-0008373]
PR - JP 148104/88-A 19880617 [1988JP-0148104]
IC - G11C-011/21

20/25 INPADOC - (C) INPADOC
PN - KR 174818 B1 19990401 [KR-174818]
TI - LARGE SCALE INTEGRATED CIRCUIT FOR LOW VOLTAGE OPERATION
IN - ETOH JUN [JP]; ITOH KIYOO [JP]; KAWAJIRI YOSHIKI [JP]; NAKAGOME
YOSHINOBU [JP]; KUME EIJI [JP]; TANAKA HITOSHI [JP]
PA - HITACHI LTD [JP]; HITACHI VLSI ENGINEERING [JP]
AP - KR 9814893/98-A 19980427 [1998KR-0014893]
PR - KR 9814893/98-A 19980427 [1998KR-0014893]
- JP 148104/88-A 19880617 [1988JP-0148104]
- JP 222317/88-A 19880907 [1988JP-0222317]
- JP 29803/89-A 19890210 [1989JP-0029803]
- JP 66175/89-A 19890320 [1989JP-0066175]
- KR 9008373/90-A3 19900608 [1990KR-0008373]
IC - G11C-011/21

21/25 INPADOC - (C) INPADOC
PN - US 37593 E1 20020319 [US--37593]
TI - LARGE SCALE INTEGRATED CIRCUIT WITH SENSE AMPLIFIER CIRCUITS FOR LOW

8/8/02

RE 37593

09/864338

VOLTAGE OPERATION

IN - ETOH JUN [JP]; ITOH KIYOO [JP]; KAWAJIRI YOSHIKI [JP]; NAKAGOME YOSHINOBU [JP]; KUME EIJI [JP]; TANAKA HITOSHI [JP]
PA - HITACHI LTD [JP]; HITACHI ULSI SYS CO LTD [JP]
AP - US 95101/98-A 19980610 [1998US-0095101]
PR - US 95101/98-A 19980610 [1998US-0095101]
- JP 148104/88-A 19880617 [1988JP-0148104]
- JP 222317/88-A 19880907 [1988JP-0222317]
- JP 29803/89-A 19890210 [1989JP-0029803]
- JP 66175/89-A 19890320 [1989JP-0066175]
- US 104508/93-A5 19930810 [1993US-0104508]
- US 366869/89-A1 19890614 [1989US-0366869]
IC - G11C-007/00; H02J-003/38

22/25 INPADOC - (C) INPADOC

PN - US 4984325 A 19910115 [US4984325]
TI - WINDSHIELD WIPER
IN - ARAI MASARU [JP]; SAITA ITSURO [JP]
PA - NIPPON WIPER BLADE CO LTD [JP]
AP - US 432877/89-A 19891107 [1989US-0432877]
PR - JP 148104/88-U 19881115 [1988JP-U148104]
- JP 11415/89-U 19890203 [1989JP-U011415]
- JP 13615/89-U 19890209 [1989JP-U013615]
IC - A47L-001/00

1/1 LEGALI - (C) LEGSTAT

PN - US 4984325 [US4984325]
AP - US 432877/89 19891107 [1989US-0432877]
DT - US-P
ACTE - 19891107 US/AE-A
APPLICATION DATA (PATENT)
{US 432877/89 19891107 [1989US-0432877]}
- 19891107 US/AS02
ASSIGNMENT OF ASSIGNOR'S INTEREST
NIPPON WIPERBLADE CO., LTD., 998, OAZA KAMIOCHIAI, YONO-SHI,
SAITAMA-KEN, JAPAN * ARAI, MASARU : 19891026; SAITA, ITSURO : 19891026
- 19910115 US/A
PATENT
- 19990330 US/FP [-]
EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE
990115
UP - 1999-15

23/25 INPADOC - (C) INPADOC

PN - US 5262999 A 19931116 [US5262999]
TI - LARGE SCALE INTEGRATED CIRCUIT FOR LOW VOLTAGE OPERATION
IN - ETOH JUN [JP]; ITOH KIYOO [JP]; KAWAJIRI YOSHIKI [JP]; NAKAGOME YOSHINOBU [JP]; KUME EIJI [JP]; TANAKA HITOSHI [JP]
PA - HITACHI LTD [JP]; HITACHI VLSI ENG [JP]
AP - US 838505/92-A 19920324 [1992US-0838505]
PR - US 366869/89-A3 19890614 [1989US-0366869]
- JP 148104/88-A 19880617 [1988JP-0148104]
- JP 222317/88-A 19880907 [1988JP-0222317]
- JP 29803/89-A 19890210 [1989JP-0029803]
- JP 66175/89-A 19890320 [1989JP-0066175]
IC - G11C-005/14; G11C-007/00

8/8/02

RE 37593

09/864338

1/1 LEGALI - (C) LEGSTAT
PN - US 5262999 [US5262999]
AP - US 838505/92 19920324 [1992US-0838505]
DT - US-P
ACTE- 19920324 US/AE-A
APPLICATION DATA (PATENT)
{US 838505/92 19920324 [1992US-0838505]}
- 19931116 US/A
PATENT
- 19940531 US/CC
CERTIFICATE OF CORRECTION
UP - 1994-28

24/25 INPADOC - (C) INPADOC
PN - US 5297097 A 19940322 [US5297097]
TI - LARGE SCALE INTEGRATED CIRCUIT FOR LOW VOLTAGE OPERATION
IN - ETOH JUN [JP]; ITOH KIYOO [JP]; KAWAJIRI YOSHIKI [JP]; NAKAGOME YOSHINOBU [JP]; KUME EIJI [JP]; TANAKA HITOSHI [JP]
PA - HITACHI LTD [JP]; HITACHI VLSI ENGINEERING [JP]
AP - US 366869/89-A 19890614 [1989US-0366869]
PR - JP 148104/88-A 19880617 [1988JP-0148104]
- JP 222317/88-A 19880907 [1988JP-0222317]
- JP 29803/89-A 19890210 [1989JP-0029803]
- JP 66175/89-A 19890320 [1989JP-0066175]
IC - G11C-005/14; G11C-011/407

1/1 LEGALI - (C) LEGSTAT
PN - US 5297097 [US5297097]
AP - US 366869/89 19890614 [1989US-0366869]
DT - US-P
ACTE- 19890614 US/AE-A
APPLICATION DATA (PATENT)
{US 366869/89 19890614 [1989US-0366869]}
- 19890614 US/AS02
ASSIGNMENT OF ASSIGNOR'S INTEREST
HITACHI, LTD., 6, KANDA SURUGADAI 4-CHOME, CHIYODA-KU, TOKYO, JAPAN A CORP. OF J * ETOH, JUN : 19890608; ITOH, KIYOO : 19890608; KAWAJIRI, YOSHIKI : 19890608; NAKAGOME, YOSHINOBU : 19890608; KUME, EIJI : 19890608;
- 19940322 US/A
PATENT
- 19940726 US/CC
CERTIFICATE OF CORRECTION
- 19990323 US/RF
REISSUE APPLICATION FILED
980610
UP - 1999-15

25/25 INPADOC - (C) INPADOC
PN - US 5526313 A 19960611 [US5526313]
TI - LARGE SCALE INTEGRATED CIRCUIT WITH SENSE AMPLIFIER CIRCUITS FOR LOW VOLTAGE OPERATION
IN - ETOH JUN [JP]; ITOH KIYOO [JP]; KAWAJIRI YOSHIKI [JP]; NAKAGOME YOSHINOBU [JP]; KUME EIJI [JP]; TANAKA HITOSHI [JP]

8/8/02

RE 37593

09/864338

PA - HITACHI LTD [JP]; HITACHI VLSI ENG [JP]
AP - US 104508/93-A 19930810 [1993US-0104508]
PR - US 104508/93-A 19930810 [1993US-0104508]
- JP 148104/88-A 19880617 [1988JP-0148104]
- JP 222317/88-A 19880907 [1988JP-0222317]
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IC - G11C-007/00

1/1 LEGALI - (C) LEGSTAT
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AP - US 104508/93 19930810 [1993US-0104508]
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APPLICATION DATA (PATENT)
{US 104508/93 19930810 [1993US-0104508]}
- 19960611 US/A
PATENT
- 19981130 US/AS01
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HITACHI ULSI SYSTEMS CO., LTD. 22-1, JOSUIHONCHO 5-CHOME KODAIRA-SHI,
TOKYO, JAP * HITACHI VLSI ENGINEERING CORPORATION : 19980827
- 20011204 US/RF
REISSUE APPLICATION FILED
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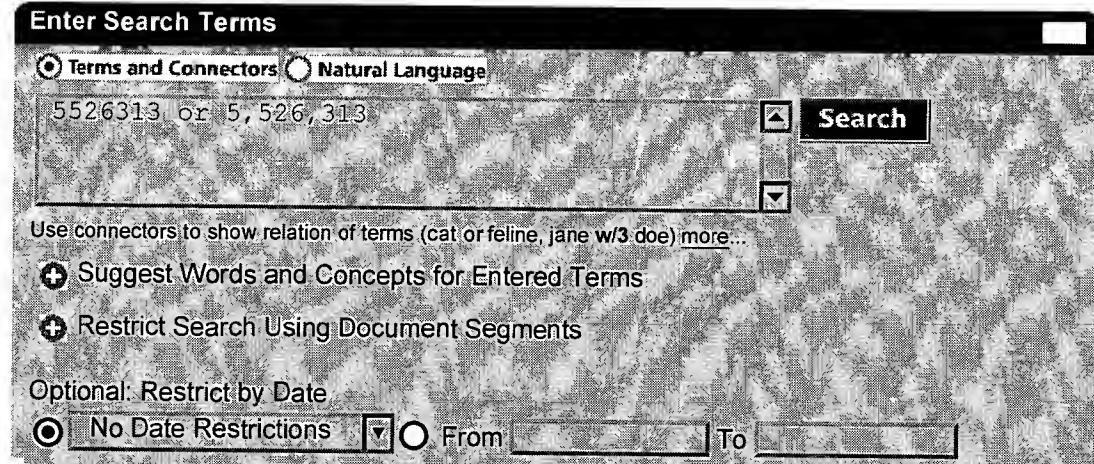
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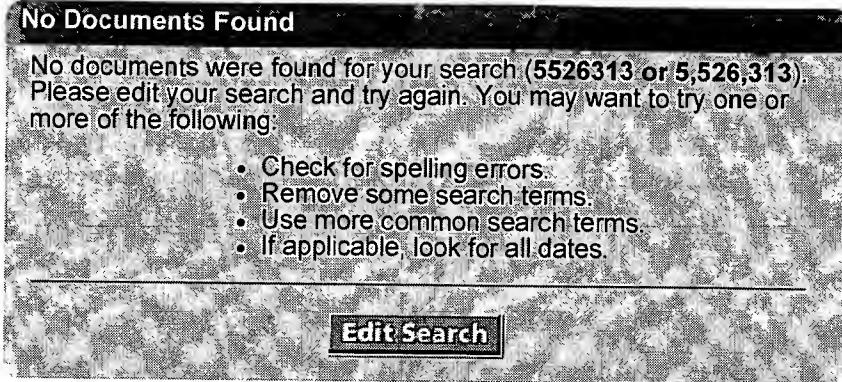
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Terms and Connectors Natural Language

5526313 or 5,526,313

Use connectors to show relation of terms (cat or feline, jane w/3 doe) [more...](#)

 Suggest Words and Concepts for Entered Terms

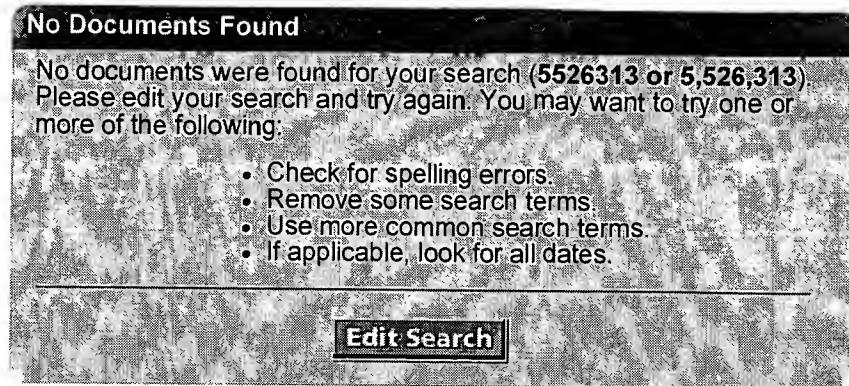
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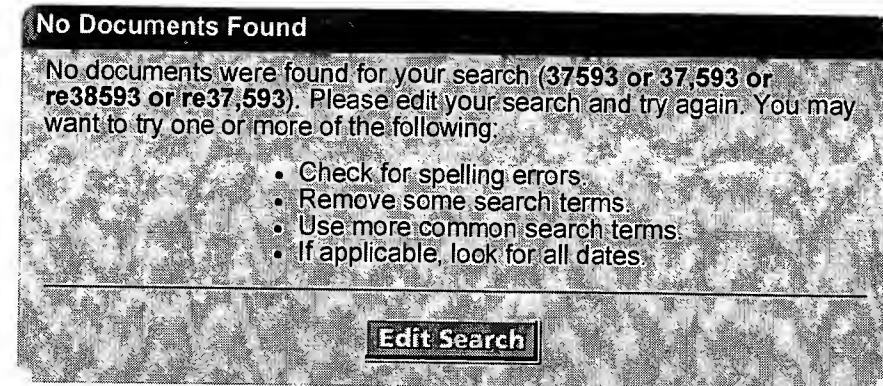
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[① 1. MERCK & CO. v. COMMERCIAL SOLVENTS CORP.](#), Civ. A. No. 13574, UNITED STATES DISTRICT COURT FOR THE DISTRICT OF MARYLAND, 225 F. Supp. 318; 1964 U.S. Dist. LEXIS 9770; 140 U.S.P.Q. (BNA) 172, January 7, 1964

OVERVIEW: As questions of fact were raised in plaintiffs' patent infringement action, defendant's motion for summary judgment was denied; questions of fact were not properly decided on motion for summary judgment.

CORE TERMS: patent, allowance, invention, continuation-in-part, summary judgment, oath, subject matter, filing date, patenting, termination...

... application Serial No. **37,593**, filed June 21, ...
... application Serial No. **37,593**, filed on February 10, ...
... between Serial No. **37,593** as filed and Serial No. ...
... application Serial No. **37,593**, and examples 9 and 10 ...
... by Serial No. **37,593**, filed June 21, ...
... supporting Serial No. **37,593** was verbatim as to subject matter common to Serial Nos. **37,593** and/or 717,068 and/or 624,198. Defendant ...

[2. Harmonized Tariff Schedule of the United States\[PART 21 OF 25\]](#), Investigation No. 731-TA-739 (Preliminary), 1995 ITC LEXIS 598, UNITED STATES INTERNATIONAL TRADE COMMISSION, December 12, 1995
... 37592-72-6 **37593-02-5 37593-03-6** 37599- ...

[3. CERTAIN FABRICATED STRUCTURAL STEEL FROM CANADA. Determination of the Commission in Investigation No. 731-TA-387 \(Preliminary\) Under the Tariff Act of 1930, Together With the Information Obtained in the Investigation.](#), Investigation No. 731-TA-387 (Preliminary), 1988 ITC LEXIS 10, USITC PUBLICATION 2062, UNITED STATES INTERNATIONAL TRADE COMMISSION, FEBRUARY 1988

CORE TERMS: fabricated, structural steel, import, producer, bid, fabricator, questionnaire, domestic, ton, shipment...

... Table E-2 Income-and-loss experience of U.S. producers of fabricated structural steel for buildings on their operations producing all fabricated structural steel, accounting years 1984-86, and interim periods ending Sept. 30, 1986, and Sept. 30, 1987 Interim periods ending Sept. 30- Item19841985198619861987 ...
administrative expenses**37,593**43,33844,30630,37831,216



4. COLOR PICTURE TUBES FROM CANADA, JAPAN, THE REPUBLIC OF KOREA, AND SINGAPORE. Determinations of the Commission in Investigations Nos. 731-TA-367 Through 370 (Preliminary) Under the Tariff Act of 1930, Together With the Information Obtained in the Investigations., Investigations Nos. 731-TA-367 Through 370 (Preliminary), 1987 ITC LEXIS 255, USITC PUBLICATION 1937, UNITED STATES INTERNATIONAL TRADE COMMISSION, JANUARY 1987

CORE TERMS: picture tubes, color, import, receiver, tube, u.s., picture tube, imported, producer, incomplete...

... Table 21. -- Color picture tubes: Apparent U.S. consumption and market penetration of imports, by screen sizes, 1983-85, January-September 1985, and January-September 1986 Apparent consumption Jan.-Sept. --
Item19831984198519851986 ... Singapore7,7487,162**37,593**6,2018,673

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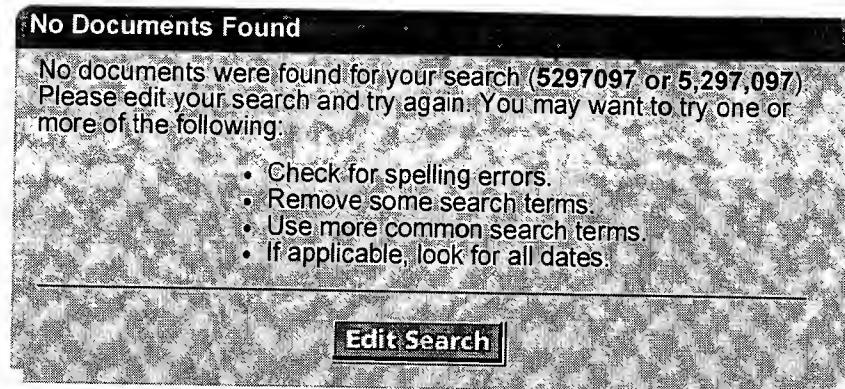
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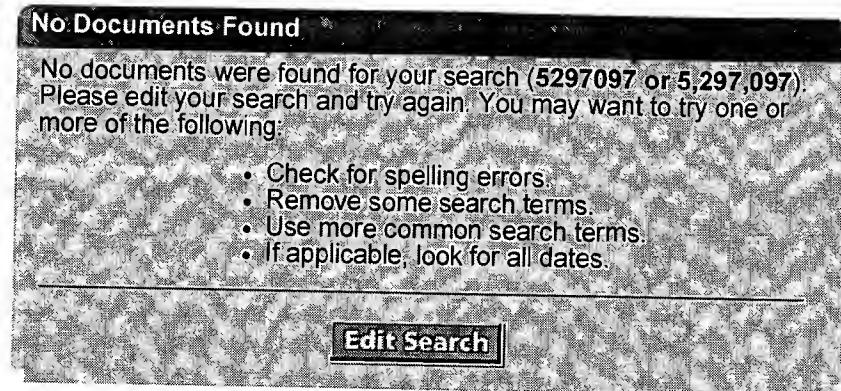
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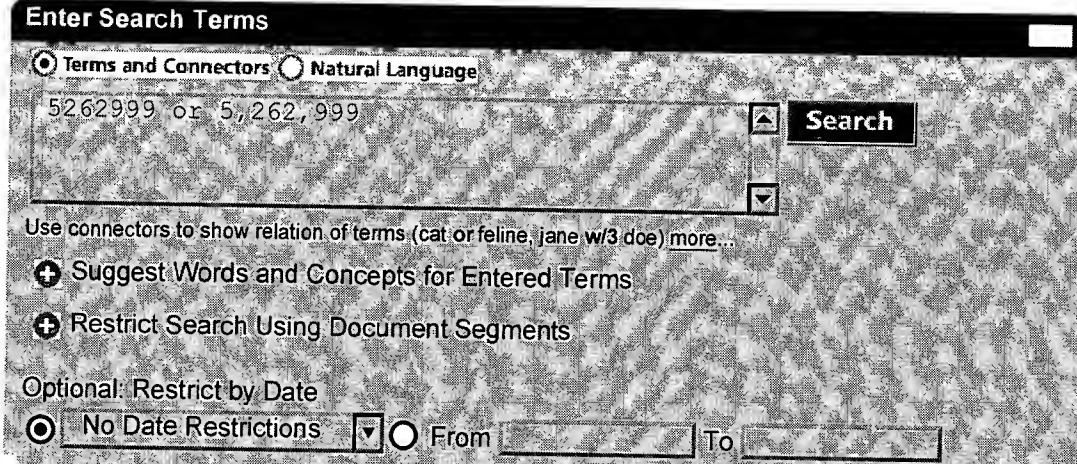
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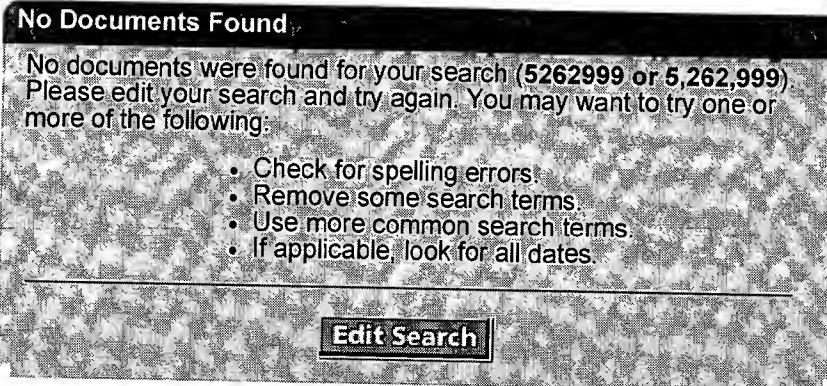
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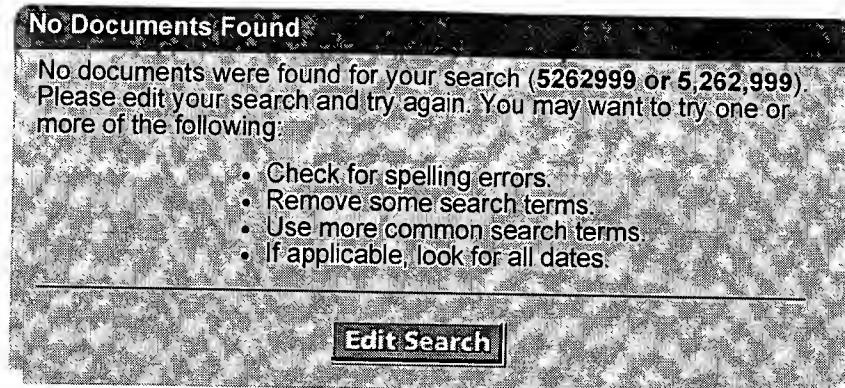
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